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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/815,308	04/01/2004	Thomas Strothmann	12873/04787	7265

24024 7590 09/21/2005

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EXAMINER

HERNANDEZ, OLGA

ART UNIT PAPER NUMBER

2144

DATE MAILED: 09/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/815,308

Applicant(s)

STROTHMANN, THOMAS

Examiner

Olga Hernandez

Art Unit

2144

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 8/16/05.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 8-13, 17-22 and 26-29 is/are rejected.
- 7) ☒ Claim(s) 4-7, 14-16 and 23-25 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 10, 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Avitan (5,487,437) in view of Ando et al (5,388,658).

As per claims 1, 10 and 19, Avitan teaches:

- determining a turning reference and vehicle velocity (figure 1, abstract);
- determining a reference distance from the turning reference (figure 1);
- determining a wheel drive distance from the turning reference for each wheel drive of the multi-wheel drive vehicle (figure 1).

Avitan does not teach determining an independent velocity for each wheel drive based on the vehicle velocity, wheel drive distance, and reference distance, and outputting the independent determined velocity for each wheel drive to each wheel drive. However, Ando teaches determining an independent velocity for each wheel drive based on the vehicle velocity, wheel drive distance, and reference distance, and outputting the independent determined velocity for each wheel drive to each wheel drive (column 2, lines 11-23, column 3, lines 41-55, column 4, lines 9-19, figures 1, 5 and 6). Thus, it would have been obvious to

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one skill in the art to combine Avitan's invention with Ando's independent velocity for each wheel in order to optimize vehicle performance and to prevent the vehicle from exceeding a predetermined lateral acceleration limit.

As per claims 9, 18 and 27, Avitan does not teach the steering angle of at least one wheel drive. However, Ando teaches it in column 3, lines 52-53. Thus, it would have been obvious to one skill in the art to combine Naito's invention with Ando's independent velocity for each wheel in order to optimize vehicle performance and to prevent the vehicle from exceeding a predetermined lateral acceleration limit. Therefore, it would have been obvious to one of ordinary skill in the art to combine the aforementioned references in order to enhance the vehicle's control.

Claims 2, 11, 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Avitan (5,487,437) in view of Ando et al (5,388,658), further in view of Naito (5,168,953).

As per claims 2, 11 and 20, neither Ando nor Avitan teaches to read the position output of a user manipulable control device. However, Naito teaches how to read the position output of a user manipulable control device (column 8, line 20). Therefore, it would have been obvious to one of ordinary skill in the art to combine the aforementioned references in order to enhance the vehicle's control.

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Claims 3, 8, 12, 17, 22 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Avitan (5,487,437) in view of Ando et al (5,388,658), further in view of Ikeda et al (5,157,611).

As per claims 3, 12 and 22, neither Avitan nor Ando teaches how to read the angular position of a steering servo-mechanism. However, Ikeda teaches it in column 3. Therefore, it would have been obvious to one of ordinary skill in the art to combine the aforementioned references in order to enhance the vehicle's control.

As per claims 8, 17 and 26, neither Avitan nor Ando teaches how to determine the steering angle of for at least one wheel drive. However, Ikeda teaches how to determine the steering angle of for at least one wheel drive (columns 5-6). Therefore, it would have been obvious to one of ordinary skill in the art to combine the aforementioned inventions in order to enhance the vehicle's control.

Claims 13 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Avitan (5,487,437) in view of wheelchair's joystick.

As per claims 13 and 21, Avitan does not teach the use of a joystick. However, this feature is used in wheelchairs today and it would have been obvious to one of ordinary skill in the art to combine both inventions in order to give different options of comfort to the users.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 28 and 29 are rejected under 35 U.S.C. 102(b) as being anticipated by Ikeda et al (5,115,611).

As per claims 28 and 29, Ikeda discloses how to read an angle value associated to the steering position (column 4, lines 19-20); determine a velocity based on the angle, a vehicle reference point's velocity and location from a predetermined origin, and at least one wheel drive base dimension for at least one wheel drive (column 4, lines 20-45), and output the determined velocity to the at least one wheel drive (column 5, lines 1-15).

Allowable Subject Matter

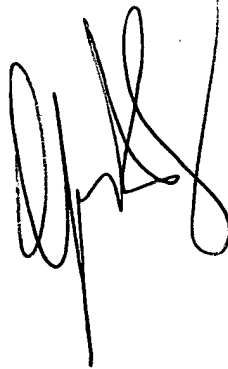
Claims 4-7, 14-16, 23-25 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Olga Hernandez whose telephone number is 571-272-7144. The examiner can normally be reached on Mon-Thu 8:30am-7:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wiley can be reached on 571-272-3923. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to be 'O. Hernandez', with a long vertical line extending downwards from the bottom of the signature.

Olga Hernandez
Examiner
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